

1-1: Variables and Expressions

Key Terms:

- Variables
- Expressions

Goals:

-words \longleftrightarrow expressions

-Variable:

A SYMBOL, USUALLY A LETTER
THAT REPRESENTS A VALUE

ex.

x y A B

-Expression:

MATH PHRASE THAT INCLUDES
ONE OR MORE VARIABLES AND/OR

ex.

CONSTANTS

$2x - 13$

+

increased by

plus

add

sum

___ more than ___

minus

subtract

-

less

difference

decreased by

___ less than ___

times

product of

twice

double

multiply

triple

divided by

quotient

half

X

/

8 LESS THAN B
B - 8

Example 1:

32 more than a number n
+

$$32 + n$$

Example 2:

58 less a number n
-

$$58 - n$$

$$x + 9$$

9 MORE THAN
A NUMBER X

A NUMBER X
PLUS 9

$$y - 3$$

3

SUBTRACTED
FROM A NUMBER
Y

3 LESS THAN A
NUMBER Y

Example 3:

$$8 \cdot n \quad \cancel{8 \times n}$$

8 times a number n

*
Example 4:

$$8n$$

the quotient of a number n and 5

$$n \div 5$$

$$\div$$

$$\frac{n}{5}$$

$$7x$$

- SEVEN TIMES X

- THE PRODUCT OF
7 AND X

$$\frac{n}{6}$$

- N DIVIDED BY
6

- THE QUOTIENT OF
n AND 6

1-1 Additional Vocabulary Support









Variables and Expressions

difference	divided by	less	more than
product	quotient	sum	times

Use the list to write two words or word phrases that represent each operation.

- Addition _____
- Subtraction _____
- Multiplication _____
- Division _____

For Exercises 5–12, draw a line from each phrase in Column A to a matching algebraic expression in Column B. The first one is done for you.

Column A		Column B
5. 9 times a number p		A $15q$
6. 34 less than a number d		B $\frac{k}{6}$
7. 12 more than a number n		C $t + 7$
8. the quotient of a number k and 6		D $d - 34$
9. a number v divided by 4		E $s - 18$
10. the sum of t and 7		F $n + 12$
11. the product of q and 15		G $9p$
12. 18 fewer than s		H $\frac{v}{4}$

1-1

Practice

Form G

Variables and Expressions

Write an algebraic expression for each word phrase.

1. 10 less than x

$$x - 10$$

2. 5 more than d

$$d + 5$$

3. 7 minus f

$$7 - f$$

4. the sum of 11 and k

5. x multiplied by 6

$$x \cdot 6 \quad 6x$$

6. a number t divided by 3

7. one fourth of a number n

$$n \cdot \frac{1}{4} \quad \frac{n}{4}$$

8. the product of 2.5 and a number t

$$2.5t$$

9. the quotient of 15 and y

10. a number q tripled

11. 3 plus the product of 2 and h

12. 3 less than the quotient of 20 and x

Write a word phrase for each algebraic expression.

13. $n + 6$

14. $5 - c$

15. $11.5 + y$

16. $\frac{x}{4} - 17$

17. $3x + 10$

18. $10x + 7z$

Write a rule in words and as an algebraic expression to model the relationship in each table.

19. The local video store charges a monthly membership fee of \$5 and \$2.25 per video.

Videos (v)	Cost (c)
1	\$7.25
2	\$9.50
3	\$11.75